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Ojanen Law Offices
2665 Riverside Lane NE
Rochester, MN 55906-3456

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALFIO FABRIZI and ANGELO LITTERA

Appeal 2009-001186[1]
Application 10/602,901
Technology Center 2100

Decided: October 19, 2009

Before ALLEN R. MacDONALD, *Vice Chief Administrative Patent Judge,*
JEAN R. HOMERE, and JAMES R. HUGHES, *Administrative Patent
Judges.*

HOMERE, *Administrative Patent Judge.*

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the final rejection of claims 19 through 53. Claims 1 through 18 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellants' Invention

Appellants invented a method and system for configuring a data processing (DP) system to enhance its fault tolerance thereby making it highly available (HA). (Spec. 1, ll. 5-6.) As shown in Figure 3, the DP system includes a server computer (105) having an inspection/interrogation agent (300) that collects production server parameters, which are used to generate a parameter database (303), and to configure the server as a highly available system. (Spec. 10, l. 12- spec. 11, l. 5.) The DP system also includes a client computer (115/125) having an expert system (309) and a project database (315) into which the server parameters are downloaded via a network (110). (Spec. 11, ll. 5-19.) The project database (315) may also contain default questions and parameters derived from answers used to define the HA data processing system. (Id. at 19-22.) The client computer (115/215) uses predefined high availability rules in a knowledge database (311) to analyze the parameters in the project database (315) and to subsequently configure the data processing system for high availability. (Spec. 11, l. 23- spec. 12, l. 32.)

Illustrative Claim

Independent claim 19 further illustrates the invention. It reads as follows:

A system for configuring a highly-available data processing system, comprising:

an inspection agent adapted to:

automatically explore and inspect a production server;

identify and collect a plurality of production server computer parameters;

generate a production server computer parameter database of the production server computer parameters necessary to configure the production server to be the highly-available data processing system;

an expert-system module adapted to:

read the production server computer parameter database;

generate a project database comprising the production server computer parameters, a plurality of default questions and a plurality of additional questions, if any, and the respective production server computer parameters derived from the answers used to define the highly-available data processing system;

select from a plurality of predefined rules those rules pertinent to analyze the project database; and

define the highly-available data processing system from the production server computer parameter database.

Prior Art Relied Upon

The Examiner relies on the following prior art as evidence of unpatentability:

Han	2002/0052807	May 2, 2002
Bottom	2003/0069953	Apr. 10, 2003

Rejections on Appeal[2]

The Examiner rejects the claims on appeal as follows:

1.   Claims 19 through 25, 27 through 30, 33 through 42, and 45 through 53 stand rejected as being anticipated by Bottom.

2.   Claim 26, 31, 32, 43 and 44 stand rejected as being unpatentable over the combination of Bottom and Han.

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[2] Claims 19-53 were also rejected as being directed to non statutory subject matter under 35 USC 101. (Final Action 2-3.) However, the Examiner indicates that Appellants' arguments in the Appeal Brief are persuasive, and consequently withdrew the rejection in the Examiner's Answer. (Ans. 11.)

Appellants' Contentions

Appellants contend that Bottom does not teach an inspection agent that generates a parameter database to configure a production server of a highly available system as recited in independent claim 19. (App. Br. 10.) According to Appellants, while Bottom discloses extracting health and performance metrics, they are not the type of parameters that can be used to configure a production server for a highly available data processing system. (*Id.*) Further, Appellants argue that Bottom does not disclose a knowledge database having a plurality of default questions to be answered to define the highly available data processing environment. (*Id.*) Thus, Appellants argue that Bottom neither anticipates the claims on appeal nor does it render them unpatentable alone or in combination with other references. (App. Br. 10-11.)

Examiner's Findings

The Examiner finds that Bottom's disclosure of storing in a local database extracted health and performance metrics, which are made available to other applications, teaches the parameter database. (Ans. 4, 12-13.) Further, the Examiner finds that Bottom's disclosure of a database that stores parameters, questions, and answers related to the parameters along with a determination of whether predetermined thresholds are being violated teaches the knowledge database with default questions to define the highly available DP system. (*Id* at 14.)

II. ISSUE

Have Appellants shown that the Examiner erred in finding that Bottom teaches or suggests an inspection agent that generates a parameter database and a knowledge database with default questions to configure a highly available system?

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Bottom

1.   Bottom discloses a high availability (HA) management system wherein the modular architecture in various servers in the chassis is continually monitored in order to perform hot swap of modular system components thereby rendering the system highly available. (Abstract.)

2.   As shown in Figure 1A, upon electing a server in the chassis as an active manager server (105) to host system management, the elected server (105) runs services for all servers in the chassis. (Para. 0019.)

3.   The manager server extracts health performance and metrics for each server in the chassis and stores them in a local database. The extracted health and performance metrics are made available to various applications such as graphical user interface (GUI) and web-server interface. (Para. 0020.)

4.   The extracted parameters pertain to the CPU, physical or virtual memory, disk, network IO, storage capacity. (Para. 0028.) They include health, power, and temperature of the devices. The extracted parameters are also shared with other servers in the chassis. (Para. 0021, 0050, 0055.)

5.   The HA management system (100) provides health and performance detection, fault detection, and failure recovery. (Para. 0029, 0031.)

6.   The HA management system (100) allows users to define certain metrics and health performance thresholds, upon which boundaries being exceeded, cause a middleware to trigger an alert to the corresponding user. (Para. 0034.)

7.   As shown in Figure 5, the middleware (535) may store extracted health metrics and performance information (e.g. temperature level, power level, CPU utilization) in the memory database (525) to provide information to a user at the web server (520). The extracted information helps determine whether a predetermined threshold has been violated due to a faulty device which is hot swapped. (Para. 0055-0056.)

8.   In the event of failure of the active manager server, another server is elected to replace the managing server thereby preserving continuity in the HA management system. (Para. 0032.)

Han

9.   Han discloses that web-enabled and IP based architectures generally involve a database schema comprising of rows and columns (relational databases) for storing database/ file systems. (Para. 0015.)

10.   Han discloses an XML data structure schema as an embodiment of the web-based architecture. (Para. 0067.)

IV. PRINCIPLES OF LAW

Anticipation

In rejecting claims under 35 U.S.C. § 102, "[a] single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation." *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005) (citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed. Cir. 1992)).

> Anticipation of a patent claim requires a finding that the claim at issue 'reads on' a prior art reference. In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.

Atlas Powder Co. v. IRECO, Inc., 190 F.3d 1342, 1346 (Fed. Cir. 1999) (internal citations omitted).

Obviousness

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

> Section 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art" and discussed circumstances in which a patent might be determined to be obvious. *Id.* at 401 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966)) (citation omitted). The Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. The operative question in this "functional approach" is

9

thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 415, 417.

The Federal Circuit recently recognized that "[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 416). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." *Id.* at 1162 (citing *KSR*, 550 U.S. at 417-418).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See Kahn*, 441 F.3d at 987-988; *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account "not only the specific teachings of the reference but also the inferences which one skilled in the art would

reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826
(CCPA 1968) (citation omitted).

V. CLAIM GROUPING

Appellants argue the patentability of claims 19, 33, and 39 in
conjunction with the rejection of claims 19-53. In accordance with 37
C.F.R. § 41.37(c)(1)(vii), we will consider the claims on appeal as standing
and falling with representative claims 19, 33, and 39.

VI. ANALYSIS

Anticipation

Independent claim 19 requires in relevant part:

> (1) an inspection agent adapted to . . . generate a production
> server computer parameter database of the production server computer
> parameters necessary to configure the production server to be the
> highly available data processing system . . . (Emphasis added.)

As set forth in the Findings of Facts section, Bottom discloses an HA
management system that elects a managing server to monitor the
performance of fellow servers in a chassis by extracting the health,
performance, and metrics of the servers and thereafter store them in a local
database. (FF. 1-3.) Further, Bottom discloses that the extracted parameters
are shared with all the servers and various applications in the HA system to
enable a hot swap of a defective server module thereby rendering the system
highly available. (FF. 1, 4-5.) We find that the extracted health

11

performance and metrics are parameters that are used to generate the local database. We further find that since these parameters are propagated to other servers in the chassis as well as other applications to enable high availability in case of a failure, the parameters in the local database are used to configure a server as the highly available system. We therefore agree with the Examiner that the Bottom's extracted parameters are used to generate a parameters database, which is used to configure the server as the highly available data processing system. We further agree with the Examiner that the claim only requires parameters in general without specifying a particular type of parameters to configure the server as a highly available system. Therefore, Appellants' argument that Bottom's disclosed parameters are not of the same type as the claimed parameters is not commensurate with the scope of the claim. It is therefore not persuasive.

Next, independent claim 19 further requires in relevant part:

> (2) an expert-system module adapted to ... generate a project database comprising the production server computer parameters, a plurality of default questions and a plurality of additional questions, if any, and the respective production server computer parameters derived from the answers used to define the highly available data processing system. (Emphasis added.)

As set forth in the Findings of Facts, Bottom discloses a middleware that stores the extracted server parameters in a memory database, and automatically determines whether the extracted parameters exceed certain user-predefined thresholds to thereby alert the user of possible violations.

(FF. 6-7.) We find that Bottom's middleware to be an expert module that generates the memory database by transferring therein the extracted server parameters. We further find that the determination of whether the parameters exceed a predefined threshold teaches various questions that are evaluated by applying predefined rules on the extracted parameters. Additionally, we find that the determination of whether a violation occurred teaches a plurality of answers to the questions used to define the high availability of a data processing system. We therefore agree with the Examiner that Bottom does disclose a knowledge database with default questions to define the highly available DP system. It follows that Appellants have not shown that the Examiner erred in finding that Bottom anticipates claims 19, 33, and 39.

Obviousness

Regarding claims 26, 31, 32, 43, and 44, Appellants reiterate that Bottom does not teach the limitations of base claims 19, 33, and 39 argued above, and therefore cannot render these dependent claims unpatentable. (App. Br. 11.) Further, Appellants argue that Han does not remedy the deficiencies of Bottom as previously argued. (*Id.*) We do not agree. As discussed above, we find no such deficiencies in Bottom for Han to cure. Additionally, we find that Han's disclosure of using file structures as XML files (FF. 10) or that web based applications generally involve relational databases that stores a plurality of file systems (FF. 9) complements

Bottom's teachings. We thus find that both Bottom and Han disclose prior art elements that perform their ordinary functions to predictably result in a highly available and flexible modular server architecture. Therefore, Appellants' argument that there is insufficient rationale to combine Bottom and Han is not persuasive. It follows that Appellants have not shown that the Examiner erred in concluding that the combination of Bottom and Han renders the cited claims unpatentable.

VII. CONCLUSIONS OF LAW

1.   Appellants have not established that the Examiner erred in rejecting claims 19-25, 27-30, 33-42, and 45-53 as being anticipated under 35 U.S.C. § 102(e).

2.   Appellants have not established that the Examiner erred in rejecting claims 26, 31, 32, 43, and 44 as being unpatentable under 35 U.S.C. § 103(a).

VIII. DECISION

We affirm the Examiner's rejection of claims 19 through 53.

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

dal/nhl

Ojanen Law Offices
2665 Riverside Lane NE
Rochester MN 55906-3456